Public Works

"I am from Wichita and have seen this city grow and prosper over the years. To know that I have a part in that process makes me feel like I am Wichita."

- Gerry Benton
  Mechanic II, Fleet Maintenance

The mission of the Public Works Department is to provide for the design, construction and maintenance of the City's streets, bridges, sidewalks and traffic control devices; provide maintenance and custodial services for City buildings; provide management oversight of the landfill and associated solid waste programs; operate and maintain the City's storm water drainage system; and manage and operate the City's vehicle fleet.

RECENT ACCOMPLISHMENTS

Administered construction projects. Initiated 317 construction contracts totaling $77,815,020. Of the 317 projects, 211 were subdivision projects. The 211 projects totaled $26.9 million. From 2002 to 2003 subdivision construction activity increased by 52%.

Park maintenance consolidation. To increase operating efficiency, Park building maintenance was consolidated into Building Services and Park small equipment maintenance was moved into the Fleet Division. These changes included moving 9 full-time and 3 part-time positions and a total of $585,000 in annual resources.

New computer system. Implemented Datastream, the City's new asset management system, in the Fleet Division and began the implementation process in the Buildings Division.

Newly annexed areas. Continued the standard of providing routine services such as sign replacement/repair, street grading and ditching to newly annexed areas within two weeks of annexation.

Fire fleet maintenance. Fire fleet maintenance operations were relocated to the Central Maintenance Facility (CMF) to provide centralized control, oversight and direction. The new facility provides additional space and improved equipment to increase efficiency of repair operations and decrease the time emergency vehicles are out of service.

Centralized Buildings operations. Building Services began the process of establishing their first ever centralized base of operations at the facility formerly housing Fire Fleet maintenance. The consolidated maintenance location is expected to increase efficiency and productivity.

Building security systems. In coordination with the Police Department, assumed responsibility for installation and maintenance of building security systems.

Energy saving signal upgrade. Began a two year program to install LEDs (Light Emitting Diode) to replace all green bulbs in signalized crosswalks. When fully implemented, the new technology is expected to save about $53,000 per year in operating costs.

Met pollution prevention requirements. Met NPDES (National Pollution Discharge Elimination System) requirements for storm water system cleaning and street sweeping.

CMF campus improvements. Improved the CMF by replacing the oversized and aged propane fueling tank with a smaller unit from another City facility, widened drives for pedestrian and vehicle safety and increased parking space for City equipment and employee vehicles.

Major building and facilities projects. Completed several major building projects, including the Wichita Art Museum, Water Distribution facility, Alford Branch Library, Evergreen Branch Library, five Fire Stations (#4, 7, 12, 13, and 19) and the Old Town Cinema Plaza and Parking Garage.

DEPARTMENT OBJECTIVES

1. Implement a proactive preventative maintenance program for the City's streets.
2. Improve the cleanliness and appearance of the City through an enhanced street sweeping program.
3. Maintain flood protection capacity of the Wichita-Valley Center Flood Control Project.
4. Maintain the integrity and capacity of the urban drainage system.
5. Complete Capital Improvement Program projects within budget and on schedule.
6. Maximize fleet availability. Keep the fleet in service to the fullest extent possible.
7. Provide high quality, reliable fleet maintenance service. Minimize the number of vehicle repairs requiring rework.
8. Minimize the direct maintenance costs for the fleet.
9. Provide routine building maintenance and custodial services that are competitive with area average costs.
10. Promote solid waste management education through public education presentations to school groups, civic organizations, businesses and trade groups.

PERFORMANCE MEASURES

Dept. Objective	Program Measure Description	2001 Actual	2002 Actual	2003 Actual	2004 Projected	2005 Projected
1	Total number of potholes patched	68,814	41,879	53,217	60,000	60,000
1	Square yards of permanent pavement repairs	41,348	27,205	31,514	30,000	30,000
1	Blocks of dirt streets maintained	19,727	18,672	16,905	22,000	22,000
1	Blocks of alleys maintained	514	318	529	500	500
2	Rounds of residential street sweeping	2.2	2.5	2.8	3.0	3.0
2	Rounds of arterial street sweeping	11	11	14	10	10
2	Rounds of downtown street sweeping	139	139	118	120	120
3	Acres of floodway mowing	9,492	8,948	7,131	8,612	8,700
3	Acres of noxious weed control	1,300	1,859	1,500	2,000	2,000
3	Cubic yards of debris removal	3,492	6,315	4,136	3,500	3,500
3	Cubic yards of floodway erosion repair	436,302	90,235	27,892	25,000	25,000
3	Number of flap gates inspected/repaired	943	1,516	1,109	1,000	1,000
3	Linear feet of floodway fence repaired	4,550	3,650	7,315	2,000	2,000
3	Linear feet of floodway levee grading	2,666	5,263	5,863	2,500	2,500
4	Linear feet of storm sewers cleaned	727,850	1,270,000	803,894	685,000	685,000
4	Number of catch basins cleaned	68,457	58,807	56,251	45,000	45,000
4	Number of inlets/manholes repaired	216	167	200	250	250
4	Linear feet of storm sewers televised	33,087	31,513	37,863	40,000	40,000
4	Cubic yards of debris removal	2,665	1,990	2,000	2,000	2,000
4	Acres of ditch mowing	4,718	4,079	4,613	3,900	3,900
4	Cubic yards of erosion repair	16,157	14,450	38,617	8,000	8,000
4	Linear feet of storm line repairs	467	315	272	300	300
4	Value of Hot Spot projects completed	$535,000	$597,450	$474,866	$725,000	$725,000
5	Percentage of total construction projects requiring change orders	2.8%	1.0%	1.8%	1.5%	1.5%
5	Percentage of street projects requiring design change orders	7.0%	4.5%	4.9%	3.3%	3.3%
5	Percentage of CIP projects completed within budget	90.6%	92.0%	96.0%	96.9%	96.9%
6	Average percentage of fleet available for use	96.0%	96.8%	95.0%	95.0%	97.1%
7	Percentage of vehicle work orders requiring rework	N/A	1.1%	1.0%	1.0%	1.0%
8	Maintenance cost per mile for marked Police vehicles (including accidents)	$0.14	$0.12	$0.15	$0.16	$0.12
8	Maintenance cost per mile for non-Police vehicles (including accidents)	$0.18	$0.19	$0.20	$0.22	$0.15
8	Fuel costs per mile for Police vehicles	$0.11	$0.20	$0.21	$0.20	$0.20
8	Fuel costs per mile for non-Police vehicles	$0.11	$0.11	$0.16	$0.18	$0.18
9	Total direct building maintenance costs per square foot	$0.48	$0.48	$0.60	$0.62	$0.64
9	Total direct custodial costs per square foot for areas cleaned by City personnel	$1.34	$1.51	$1.36	$1.36	$1.36
9	Total direct custodial costs per square foot for areas cleaned by contract personnel	$0.72	$0.67	$0.71	$0.71	$0.75
10	Number of public education presentations given	58	31	64	60	60
10	Number of requests for resource management information answered	167	163	201	220	220
10	Pounds of paper recycled at City Hall	N/A	N/A	91,140	100,000	100,000

OVERVIEW

Public Works is organized into six divisions: Administration/Natural Resources, Engineering, Building Services, Street Maintenance, Storm Water Management and Fleet Maintenance.

Administration staff coordinate and manage all department activities. Natural Resources staff provide public information and education on environmental issues. The Engineering Division plans, designs, administers and inspects the construction of all infrastructure, such as freeways, bridges, streets, traffic signals, sewer and water lines, drainage systems and railways. Building Services provides maintenance and custodial services for more than 300 public buildings. Street Maintenance maintains curb-to-curb infrastructure, including streets, alleys, vehicular and pedestrian bridges, signalized intersections and crosswalks, street signs and pavement markings. Street Maintenance is also responsible for the operation of the construction and demolition (C&D) landfill, and oversight of the post-closure of the sanitary landfill. The Storm Water Utility is responsible for construction and maintenance of the City's storm water drainage system, including storm sewers, catch basins, streams and drainage ways. Fleet Maintenance maintains and replaces most City vehicles and pieces of equipment.

DIVISION DESCRIPTIONS

The **Administration Division** communicates public infrastructure needs to the City Council through the City Manager, and communicates with State and Federal transportation and highway agencies. Additional responsibilities include ensuring department compliance with internal and external regulations, policies, and procedures and recovering costs of damaged department property.

Administration Performance Measures

Goal: Collect funds to reimburse the City for property damage.

	2002 Actual	2003 Actual	2004 Projected	2005 Projected
Property damage cases billed	149	81	100	100
Amount billed (thousands)	$181	$72	$110	$110
Amount collected (thousands)	$130	$63	$83	$83
Percentage collected	63.0%	87.2%	75.0%	75.0%

Natural Resources staff provide public information and education on environmental issues, primarily through presentations to the public, businesses and civic organizations.

The Natural Resources Director is funded 50 percent by the Construction and Demolition landfill budget. To support the landfill operation, the Director works with regulatory agencies such as the Kansas Department of Health and Environment (KDHE) and serves as the City representative to the County's Solid Waste Advisory Board. In 2003 a permit application for a Clean Air Act Title V operating permit was submitted to KDHE as part of ongoing efforts to bring Brooks Landfill into compliance with EPA regulations. A review of new KDHE regulations for C&D demolition landfills was completed to ensure continued compliance at the Brooks C&D site.

The Director's other responsibilities include monitoring and negotiating the utility franchise agreements, researching municipal utility matters and exercising leadership in the City's response to changing telecommunications environment. In 2003 the City renewed the franchise agreement with Westar Energy (electric utility) and negotiated a new franchise agreement with Chisholm Creek Utility Authority (sewer utility).

The **Engineering Division** is responsible for planning, designing, administering, inspecting and overseeing the construction of all infrastructure including freeways, bridges, streets, traffic signals, sewers, water mains, storm drains, park and railway projects, including privately funded projects for public use. Activities include project planning and initiation, design review, right of way and utility coordination, cost estimating, contract administration, project financing and engineering advice for the Capital Improvement Program (CIP) and City departments.

In 2003 the Engineering Division administered 317 construction contracts totaling over $77 million.

The Division issues permits for utility street cuts, driveway and sidewalk construction, and performs inspections of contractors' work. Engineering also administers the street lighting system and investigates traffic concerns.

Construction contracts numbered 317 and exceeded $77 million in 2003, including 211 projects for almost $27 million for streets, sewers, water lines and other public improvements for newly developing areas in the City. Major projects for which Engineering provided oversight in 2003 included 21st Street at Arkansas, Central from Maize to Tyler, 29th Street from Rock to Webb, Douglas from Seneca to McLean, Hydraulic from MacArthur to 47th Street, Hillside from 17th Street to 21st Street and early phases of the Kellogg freeway and Rock Road interchange. Work continued on the West Kellogg freeway interchanges at Maize and Tyler, and the East Kellogg freeway interchange at Woodlawn.

In 2003, 134 contracts were awarded to consultant engineers valued at more than $14.6 million for design and construction engineering services of City projects. Projects included 29th Street west of West Street, Woodlawn from Central to 13th Street, Central from Oliver to Woodlawn, Meridian from 31st Street to Pawnee, McCormick west of K-42, and construction engineering (inspection) for the Kellogg and Rock Road freeway interchange and the Central Rail Corridor.

Engineering is responsible for the planning and design of traffic control devices such as signalized intersections, traffic signs and pavement markings. Engineering also supports the Planning Commission on development issues, monitors traffic and responds to citizen traffic concerns. In addition, Engineering administers the $2.8 million annual street lighting program, provided contractually through Westar Energy.

Engineering Performance Measures				
Goal: Close projects as soon as practical following final payment to the contractor.				
	2002 Actual	2003 Actual	2004 Projected	2005 Projected
Statements of cost prepared	195	202	160	160
Days to complete statements	82	90	90	90

In 2005 Engineering staffing is increased to handle the increasing project inspection workload. The additional inspectors and survey crew are expected to speed up the project inspection process for developers, home builders and home buyers. New staff positions include one three-person survey crew, five inspectors, one engineer, one materials testing position and one administrative position, for a total of 11 new positions. There is no cost to the taxing (General) fund, as all position costs will either be charged directly to projects or will be recovered through an overhead charge to projects. As a result of the increased staffing, the use of outside firms for construction engineering services is expected to decrease.

Building Services provides custodial, maintenance and repair services to more than 300 City-owned buildings, including City Hall, Central Maintenance Facility, Mid-America All-Indian Center, libraries, Art Museum, Wichita/Sedgwick County Historical Museum, Century II and Expo Hall, Lawrence Dumont Stadium, park shelter buildings and restrooms, community and recreation centers, Botanica, Farm and Art Market, Wichita Boathouse, Wellington Place and Fire facilities.

Building Services maintains over 300 City buildings.

In 2003 maintenance of all Park facilities was consolidated in Building Services. Technical building maintenance, including plumbing and electrical maintenance, as well as exterior maintenance such as fountains are now the responsibility of Building Services. The division received four full-time and three part-time positions and a total budget amount of $302,000 from Park Department to support the consolidated responsibilities.

The proposed budget addresses major maintenance needs for the City's buildings through a supplemental building maintenance allocation. For four years, $1.2 million was allocated to major maintenance, for a total allocation of $4.8 million. The Enhanced Building Maintenance (EBM) funds are used for major repairs that cannot be addressed with routine maintenance, such as foundation repairs, roof replacements and structural refurbishment, and aesthetic improvements and upgrades that improve the appearance of City facilities. Unspent funds from the EBM allocation were substituted for the annual buildings' contractual maintenance allocation in 2003 and 2004, effectively shifting almost a quarter million dollars per year from the General Fund to the project account. The Buildings Capital Investment Maintenance Program (CIMP) is restored to at-large funding in the proposed 2005 budget.

Increasing custodial and maintenance responsibilities for more than 300 buildings have challenged the capacity of existing staff and resources. The 2001 Budget added two custodial positions, related supplies and equipment for maintenance of the new Neighborhood City Halls. In 2002, two maintenance mechanics were added to support the increasing number of City facilities. In 2003, another maintenance mechanic was added in recognition of the Art Museum expansion. Funding for vehicles and building parts and supplies were added for each of the three new positions. The proposed 2005 budget includes a clerical position to track refrigerants and hazardous materials to meet EPA and KDHE requirements.

The Hotel at Old Town parking garage is one of over 300 buildings maintained by Building Services.

Building Services participates in the management, specification writing and administration of building construction and major building maintenance projects, in conjunction with other departments. To assist with the increasing number of public building capital projects, a Special Projects Coordinator was added in 2002. Position costs are charged to the projects.

Some of the major 2003 capital projects administered by Building Services include the construction of the Riverside Park improvements, the Wichita Art Museum expansion, the Alford Regional Library, the Evergreen Regional Library, construction and relocation of five fire stations, Old Town Cinema Plaza and Parking Garage, Sports Hall of Fame and the Central Maintenance Facility (CMF) Expansion/Water Department Relocation. 2004 capital projects include finishing the Riverside

Park improvements, the new CityArts building and one more fire station construction and relocation project.

Building Services also oversees the Cooperative Labor Program that transports and supervises inmates from the Winfield Correctional Facility. The value of labor received through this program more than offsets the costs of program administration. In 2003, over 51 thousand labor hours were provided at minimal cost to the City through this program.

Cooperative Labor Program Performance Measures				
Goal: Provide cost savings to Wichita taxpayers through the use of inmate labor.				
	2002 Actual	2003 Actual	2004 Projected	2005 Projected
Inmate labor hours	25,152	51,048	45,000	49,500
Estimated cost savings after program costs	$317,418	$511,042	$445,000	$489,500

The **State Office Building** and garage facilities are also maintained by Building Services. The building previously housed a department store and was remodeled extensively for use as an office building, opening in July 1994.

Offices housed in the State Office Building include the Human Rights Commission, Department of Social and Rehabilitation Services, Department of Revenue, Department of Health and Environment, Bureau of Investigation and the Corporation Commission. The City's Career Development Division operates out of offices on the lower level of the garage, providing a one-stop career development, training, and placement services center. Programs include the Job Training Partnership Act and Welfare to Work.

Revenue from the State finances custodial, maintenance and operating expenses of the State Office Building and garage. A private contractor provides custodial services and garage operations, while the City maintains a staff of three full-time and one part-time employee. Major maintenance projects are completed contractually. $50,000 is included each year for major maintenance on the parking garage, which has received only minor maintenance since opening. By agreement, operating expenses in excess of revenues are funded equally by the City and Sedgwick County.

State Office Building Financial Summary of Operations $ in Thousands				
	2003	2004	2005	2006
Revenues	1,055	1,011	1,111	1,111
Expenditures	934	1,197	1,601	1,105
Budgeted income (loss)	120	(186)	(490)	6
Fund balance	738	553	63	69

The **Maintenance Division** maintains curb-to-curb infrastructure, including 1,869 miles of streets and alleyways, 261 vehicular bridges, 30 pedestrian bridges, 395 signalized intersections, 150 signalized crosswalks and 60,000 street signs. In a typical year, about 60,000 tons of street sweepings are collected and delivered to the landfill. Maintenance manages snow and ice removal and coordinates the City's response to floods and damage caused by high winds and other storm events. Operations are conducted out of three City facilities: the Central Maintenance Facility (CMF), Northeast Substation and West Substation.

Traffic Maintenance maintains traffic signals, signs, pavement markings and pedestrian crossings.

The proposed 2005 budget adds an Engineering Aide to collect data on the City's street signs and traffic signals. A comprehensive database is needed to catalog and locate all of the street signs. The database will also include maintenance and replacement scheduling information, as well as warranty information on each sign. The new position is paid for by an offsetting cut in the temporary labor budget.

Maintenance Division Expenditures $ in Thousands				
	2003	2004	2005	2006
Snow and Ice	545	608	348	350
Traffic Maintenance	2,516	2,730	2,817	2,850
Street Maintenance	10,520	11,837	12,675	12,921
Street Cleaning	1,661	1,775	1,828	1,893
Landfill Operations	1,139	1,437	3,586	736
Landfill Post Closure	2,102	2,734	27,253	1,906
Total Expenditures	18,483	21,121	48,507	20,656

A program to systematically replace 200 traffic signal heads and 120 pedestrian signal heads each year is continued in the proposed 2005 budget. Replacing signal heads simplifies the replacement of lenses and bulbs, as the newer heads are less prone to breakage when handled than are the older heads, which tend to become brittle over time.

The Maintenance Division, with an annual budget of over $20 million, is larger than 13 City departments.

The 2003 budget included a program to replace green lenses and walk/don't walk panels at all 150 of the City's mid-block signals (pedestrian and school crosswalks). Savings are captured through the use of light emitting diode (LED)

technology, which use a fraction of the electricity consumed by incandescent bulbs, and have a life cycle from 5 to 10 times longer than a traditional bulb. The program is expected to recover all initial costs after four years, and savings generated in years five through eight will exceed the cost of replacing the LEDs after eight years. Use of LEDs at all signalized intersections is a possibility for the future, and cost payback models will be refined based on the City's experience with the mid-block signals.

Traffic Maintenance Performance Measures Goal: Maintain the signal and signage system to provide smooth traffic flow and traffic safety for the traveling public.				
	2002 Actual	2003 Actual	2004 Projected	2005 Projected
Hours of service and repair of signals	13,728	13,584	13,000	13,000
Sign locations serviced	11,667	14,258	15,000	15,000
Rounds of pavement markings	2	2	2	2

Thermoplastic marking equipment allows crews to use liquefied plastic to mark intersections and crosswalks. Thermoplastic marking lasts five to seven times longer than reflective paint, increasing the maintenance interval for remarking intersections and crosswalks.

Traffic maintenance spent 13,584 hours servicing and repairing traffic signals in 2003.

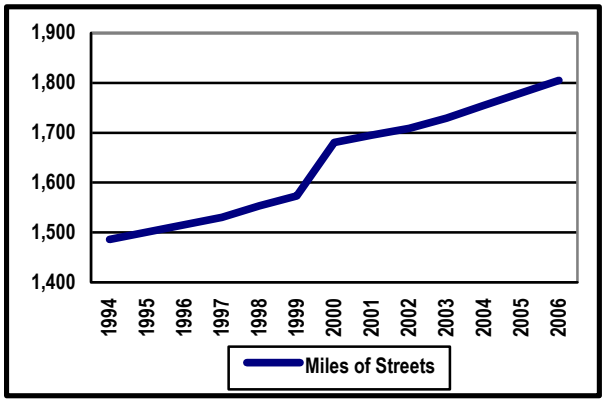
A systematic program to replace traffic signal controllers and conflict monitors began in 2002. The replacement of 20 controllers each year will allow all of the old-model controllers to be replaced in 13 years. The replacement of 40 conflict monitors annually will result in the replacement of all of the old-model conflict monitors by 2006.

Street Maintenance monitors the condition of City streets using the Pavement Management System (PMS). The PMS is a computerized street inventory and decision-making tool that rates the condition of streets and assists in determining the most cost-effective application of street maintenance resources. Streets are rated once every two to three years. The PMS compiles the pavement condition data and assigns a Pavement Quality Index (PQI) number between 10 (new condition) and zero. Streets with a PQI under seven are considered substandard. Currently, 20 percent of Wichita's streets are rated substandard.

The City added over 243 miles of streets in the last 10 years. About 20 miles are projected to be added each year in the future.

Over the last decade, the miles of City streets have grown with annexations and newly paved streets. More than 243 miles of streets were added from 1994 to 2003, an increase of 16.4%. During the same time period, lane miles increased by over 717, an increase of 21.4%. About 20 miles are projected to be added each year in 2004 – 2006. The added mileage includes almost 25 miles of dirt streets and over 70 miles of substandard asphalt streets.

The increasing miles of streets are addressed with additional budgeted resources. The proposed 2005 budget restores $600,000 for the Contract Maintenance Program that was deferred through 2003 and 2004. With the $600,000 addition, total Contract Maintenance Program annual resources are $5.5 million. The additional funding reflects the City's ongoing commitment to high-quality streets and roadways, both in the older areas of the City and for the newest Wichita neighborhoods.



A crack seal crew is also proposed for the 2005 budget. Five positions would be added to seal at least 1 million lineal feet of cracks per year. Crack sealing is critical to long-term preventative maintenance, since it reduces water infiltration into and under road surfaces, reducing the negative effects of freeze-thaw cycles. The budget proposal recommends adding the equipment for the new crew in 2004, including dump trucks, a skid steer loader, an oiler and an air compressor.

The City patched over 53,000 potholes in 2003 and projects to patch 60,000 potholes each year in the future.

Street Maintenance has also upgraded and added equipment in the past several years, including: the upgrade of two dump trucks to pothole patch trucks, which are capable of providing hot asphalt for longer lasting pothole patches and help with larger asphalt repairs; a new concrete mixer to improve productivity of maintenance crews; and two asphalt paving machines to improve productivity on major street repairs. An additional asphalt roller placed a roller in each maintenance substation.

Downtown and Old Town maintenance efforts are addressed by a riding sweeper to improve productivity when cleaning sidewalks, parking lots and other pedestrian areas. A second five-person maintenance crew and equipment was added in 2001 to maintain the new Douglas Avenue Streetscape and Reflection Square Park, as well as to improve maintenance in the Old Town area.

Street Cleaning operates a fleet of seven mechanical street sweepers for sweeping downtown, arterial and residential streets. Residential streets are swept during the daytime, while arterials and highways are swept in the evening and night times to minimize inconvenience to citizens. Street sweepings are transported to the City's Construction and Demolition (C&D) Landfill, where the sweepings are screened to remove litter and then used as cover material for C&D operations.

In order to meet National Pollution Discharge Elimination Standards (NPDES) requirements, in 2003 the City implemented a new approach to neighborhood street sweeping. Neighborhoods are now swept on a staggered basis, with older neighborhoods and neighborhoods having mature trees swept three times a year and newer neighborhoods with limited foliage levels swept once per year. Areas that are in-between (moderate numbers of trees) are swept twice per year. As a result of the new approach, street sweeping cycles in residential areas increased from 2.5 in 2002 to 2.8 in 2003.

City residential streets were swept an average of 2.8 times in 2003.

Street Cleaning is also responsible for graffiti removal and litter pickup, primarily responding to community requests for service.

The Construction and Demolition (C&D) Landfill Fund finances operation and management of Brooks Landfill. Owned by the City, Brooks C&D Landfill serves all of Sedgwick County. The 323-acre landfill receives non-putrefying waste and non-friable asbestos, the only landfill in the region licensed by KDHE to accept asbestos.

Revenues for landfill operations and solid waste programs are generated from tipping fees collected at the landfill. A private contractor operates the landfill and collects the $20 per ton tipping fee.

Sedgwick County assumed responsibility for solid waste disposal beginning on October 10, 2001. The County has implemented a transfer station system to collect and ship trash to distant landfills. Tipping fees increased from $26 per ton to $38 per ton. If the City were to dispose of its C&D waste through the transfer station, operating expenses would increase by about $2.5 million per year, and most of the increase would occur in the tax-supported (General) fund.

C&D Landfill Financial Summary of Operations
$ in Thousands

	2003	2004	2005	2006
Revenues	453	486	534	558
Expenditures	1,139	1,437	3,586	736
Budgeted income (loss)	(686)	(952)	(3,053)	(177)
Fund balance	4,182	3,230	178	1

To avoid this costly scenario, the City converted Brooks to a C&D landfill. Operating funds for the C&D landfill are included in the 2004 – 2006 Budgets. The Neighborhood Cleanup and Bulky Waste programs are funded from C&D landfill revenues. Funding for these programs is $250,000 per year.

Citizens benefit from the C&D operation in two ways. City tax increases or service reductions are not necessary to cover the cost of waste disposal and continue the neighborhood cleanup programs. Additionally, the C&D landfill is open to the public, allowing citizens a low-cost waste disposal alternative to the transfer stations. Business and industry can also save money, to the extent their waste streams are construction and demolition waste.

The City is also reducing the volume of waste flowing into the landfill. A materials crusher planned for 2005 will reduce the volume of wood waste by about 60%. In addition, wood waste will be processed and made available for re-use. City park and landscaping projects, and golf courses can use the wood mulch

produced by the materials crusher. Additionally, the mulch could be made available to contractors on City capital improvement projects, reducing project landscape costs. Any material not used would be stored and composted.

The Landfill Post Closure Fund is the City's savings account that will finance the environmental and maintenance expenses of Brooks Landfill for 30 years after closure, through 2031. Post closure landfill expenses include closed cell maintenance, groundwater monitoring to detect contaminants, operation and maintenance of the air sparging system (installed to address previously discovered contamination) and monitoring of the gas collection system.

The City is responsible for post closure costs at Brooks landfill until at least 2031.

Annually, revenue from landfill operations have been transferred to the Landfill Post Closure Fund. Additional revenue is interest earnings on the fund balance. Now that the landfill is closed, revenue to the Landfill Post Closure Fund is limited to interest. The fund balance is projected to be at least $28.67 million at 2004 year-end, and is projected to be sufficient to fund maintenance and monitoring activities. Certification to KDHE requires the City to be able to fund up to $27.76 million for landfill post closure costs.

Landfill Post Closure Financial Summary of Operations
$ in Thousands

	2003	2004	2005	2006
Revenues	919	630	895	1,141
Expenditures	2,102	2,734	27,253	1,906
Budgeted income (loss)	(1,183)	(2,104)	(26,358)	(764)
Fund balance	29,774	27,671	1,312	548

The **Storm Water Utility** constructs, reconstructs and maintains the City's storm water drainage system, including storm sewers, catch basins, streams and drainage-ways. The utility is also required to ensure the City's compliance with water quality provisions of the National Pollutant Discharge Elimination System (NPDES) permit.

Storm Water maintenance crews clean and maintain 400 miles of storm sewers, 15,000 catch basins and 130 miles of drainage ditches annually. Storm sewers are cleaned and televised to assess condition and repair needs. Catch basins are cleaned and repairs made when needed. Erosion repairs are made to drainage ditches and banks are stabilized as required. A private vendor provides contractual mowing of ditches and drains.

The Storm Water Utility operates and maintains six pump stations that move excess water in times of heavy rains or flooding. As additional pump stations are constructed in conjunction with the East Kellogg improvements, additional maintenance resources will become necessary.

Storm Water Utility Financial Summary of Operations
$ in Thousands

	2003	2004	2005	2006
Revenues	5,601	5,703	5,876	5,898
Expenditures	5,344	6,828	6,823	6,224
Budgeted income (loss)	257	(1,125)	(947)	(326)
Fund balance	2,400	1,275	328	2

The Utility is responsible for the design and construction of drainage projects approved in the Capital Improvement Program. The Utility also investigates drainage concerns from citizens and determines possible solutions. The "Hot Spots" (neighborhood drainage problems) budget was increased from $605,000 to $725,000 in 2002, expediting the solution of even more neighborhood drainage problems. To the greatest extent possible, Utility staff seek to integrate neighborhood solutions with systemic solutions, to further increase the impact of Hot Spot funds.

The Storm Water Utility budget includes $725,000 each year for neighborhood drainage projects.

Storm Water Utility operations are funded with fees paid by property owners in the City. The fee is determined by the number of equivalent residential units (ERU). One ERU is the average amount of impervious area (rooftops and pavement) for a typical residence. The fee for all single-family dwellings is based on one ERU. Businesses and industrial site fees are based on the number of ERUs on the property. The current ERU rate is $1.45.

Included in the budget is the cessation of the General Fund subsidy to the Utility. The $514,500 annual subsidy was to be phased out over three years at the rate of $171,500 each year in 2003, 2004 and 2005. The revenue is recovered by the Utility through a five cent annual increase in the ERU. In 2003, the subsidy was reduced by $171,500 and the ERU increased to $1.40. In 2004 the reduction was accelerated to balance the General Fund, and the ERU increased to $1.45. In 2005 the ERU will increase to $1.50.

Construction sites in the City are monitored by the Utility to ensure compliance with the Storm Water Pollution Prevention Ordinance. All sites must use Best Management Practices to minimize the erosion sediment and chemicals entering the drainage system, which ultimately end up in streams and rivers. To ensure compliance, industrial sites in the City are also monitored with water samples and tests to show trends in amounts and types of pollutants present.

This construction site incorporates Best Management Practices (BMPs). The barriers allow water to drain but prevent silt from flowing into the storm drainage system and ultimately into the streams and rivers.

Departments that work or make inspections in and around the drainage system assist with enforcement of the ordinance. The Utility provides education and coordination with cooperating departments including Police, Fire, Central Inspection, Public Works, Park and Environmental Health.

Capital projects currently underway include designing channel modifications in Cowskin Creek and developing a Cowskin Creek Basin master drainage plan. In addition, two major projects are expected to begin construction in 2004. The 1st and 2nd Street West Drainage Outfall provides drainage to West Street between Maple and Central, and areas adjacent to 1st and 2nd Streets from West Street to the Arkansas River. That project is expected to cost at least $7 million to construct. The Murdock, Wabash to Wichita Drainage Canal project will solve a serious flooding issue on Murdock and is expected to cost at least $900,000 to construct.

Storm Water Management also includes **City/County Flood Control**, which is responsible for inspecting, operating and maintaining the Wichita-Valley Center Flood Control Project in accordance with standards established by the Corps of Engineers. The Wichita-Valley Center Flood Control Project was a joint undertaking of the U.S. Army Corps of Engineers, Sedgwick County and the City of Wichita, and was completed in 1960. The project includes the "Big Ditch" and the Big and Little Arkansas Rivers from Valley Center to Derby. Included are 41 miles of channels, 97 miles of levees, 60 interior drainage structures and a total area of 5,613 acres.

The floodway is maintained by the Storm Water Utility and is funded equally by the City of Wichita and Sedgwick County. Maintenance includes mowing, cleaning drainage structures, removing debris from around bridges and other structures, grading levees and roadways, erosion repair, bank stabilization and repair of fences and gates. Mowing alone requires four positions plus tractors and mowing equipment. As time and supplies permit, Flood Control staff are also channelizing the floodway, which is expected to contain normal flows and limit erosion damage in the future.

Fleet Maintenance consists of three sections: Fleet Maintenance, Fire Fleet Maintenance and Central Stores. In 2002 the Fleet and Buildings Division was broken into two separate operations. A Fleet Maintenance Services Director directs and oversees the Fleet Division.

Fleet Maintenance is responsible for the operation and maintenance of approximately 2,200 automobiles, light trucks, heavy trucks, heavy equipment and light equipment used by City departments, but does not provide vehicles or service for Wichita Transit's large buses or Airport equipment. Internal customers pay rent on vehicles and equipment to offset the operation, maintenance, and future replacement costs. Services include preventive maintenance, repairs, tire service, mobile service, fueling, overhauls, towing, body shop and major mechanical repairs. Repairs to electrical components, cooling systems and tires for heavy equipment are contracted to outside vendors. Major repairs for specialized heavy equipment are managed contractually with local businesses.

Fleet maintains over 2,200 vehicles and pieces of equipment.

Fleet Financial Summary of Operations
$ in Thousands

	2003	2004	2005	2006
Revenues	8,806	10,504	10,341	10,428
Expenditures	10,467	11,034	13,619	11,066
Budgeted income (loss)	(1,661)	(530)	(3,277)	(638)
Fund balance	4,474	3,944	666	29

Central Stores procures and maintains an inventory of parts and supplies for Fleet Maintenance and other City departments. Sales to City departments average approximately $1 million annually, consisting of over 6,000 unique items stored in small inventories and purchased on a just-in-time basis. Central Stores is also responsible for collecting and disposing of used chemicals, lubricants, metals and tires.

Improving the Stores operation is an ongoing task, with dual goals of improving service delivery to field operations and reducing the cost of service provision to the City organization. Much of the benefit comes from conversion from warehousing to a just-in-time (JIT) inventory operation. More contracts have been put into place to ensure the lowest price and highest availability of materials for operations, and some contracts include provisions for delivery and vendor warehousing. By allowing vendors to store materials and keeping smaller inventories at the CMF, the City freed up space previously consumed by warehousing operations.

The Fleet operation is using a new asset management computer system. Datastream 7i went live in the 4th quarter of 2003. Datastream tracks inventory, warranties and schedules preventative maintenance (PM) on equipment. The new system will help Fleet track costs on a per unit (vehicle or equipment) basis and will improve PM scheduling and implementation. Later, when more information has been gathered, rental rates can be examined using the cost information in Datastream.

The new DataStream asset management system debuted in late 2003.

Fire Fleet Maintenance (FFM) operations merged with the rest of the City's fleet maintenance operations in 2002. Inventory management, financial management and supervision is now coordinated through the Fleet Division. The former warehouse space at the CMF has been converted to house Fire Fleet Maintenance operations, with move-in occurring in late 2003. The budget includes $290,000 in 2004 to complete facility modifications.

The majority of vehicle work is performed at the Central Maintenance Facility. Vehicles are also serviced in garages at the Northeast and West Public Works Substations. The CMF budget includes funds for the operation and maintenance of the complex, which houses Fleet Maintenance, Public Works Maintenance and Engineering, Flood Control, Storm Water Utility and Sewer Maintenance. Services include utilities, custodial services and building repairs.

This gradall is one of over 250 pieces of heavy equipment maintained by Fleet.

The budget includes safety equipment and inspections to ensure a safe and secure work environment at the garages. Three new vehicle lifts were added in 2001, and additional inspections of shop heavy equipment were funded. The inspection activities led to replacement of the overhead crane and electrical system improvements in 2002.

In 2004 – 2006 the capital replacement budget increases by $100,000 each year to address the increasing need for capital equipment replacement, in response to a 2001 external study which called for significant increases in capital investments.

Fuel pumps and the information system used to track fuel usage are also included in the 2005 and 2006 budgets. New technology will be used to electronically record each time a vehicle fuels up, allowing better tracking of fuel usage and allowing the City to apply for rebates on gas taxes for fuel used in off-road vehicles.

Additionally, the Transit fleet operation is under review for possible functional consolidation with other fleet maintenance functions. The Airport fleet operation is considered a poor candidate for functional consolidation due to the numerous Federal Aviation Administration restrictions on Airport fleet equipment location and movement.

FINANCE AND OPERATIONS

Public Works operates seven divisions out of eight different funds and subfunds. The Department's street (curb-to-curb) functions are funded with the City's share of gas tax revenues collected by the State. Gas-tax funded activities include street maintenance, street cleaning, traffic maintenance, snow and ice control, engineering and the street portion of the capital investment maintenance program.

Many other activities beyond curb-to-curb projects are paid from the General Fund, including department administration, natural resource conservation, design review for non right-of-way projects (not gas tax eligible), building services, street lighting, and the public buildings portion of the capital investment maintenance program.

Public Works operates from numerous funds besides the General Fund. Operational funds include the State Office Building, Construction & Demolition Landfill, Landfill Post Closure, Storm Water Utility, City-County Flood Control and Fleet.

FUTURE CHALLENGES

- Drainage projects in Wichita are seriously underfunded. Funding needs to be identified for over $25 million in identified drainage projects.
- Drainage studies are needed throughout Wichita to identify problem areas and recommend solutions.
- Additional funds are needed for street maintenance. Maintenance needs for the next 10 years total $70 million. Currently there is $5.5 million per year budgeted for maintenance. In order to fully fund estimated maintenance costs an additional $1.5 million per year is needed.
- Street sweeping resources have been reduced even as the City has continued to grow. In addition to the cleanliness and beautification provided by street

sweeping, the City must meet NPDES guidelines. At current staffing and equipment levels one major storm cleanup (such as after a tornado) could cause Wichita to fail to meet NPDES guidelines for street sweeping.

- The Datastream asset management system needs to be implemented in Building Services. The system will also help with tracking of refrigerants and hazardous materials, another critical issue.
- Currently the Fleet capital equipment replacement backlog is over $10 million, based on mileage/hours. The backlog would be larger if age were also considered.
- Transform the Fleet operation to a preventative maintenance function, to lower fleet costs and increase fleet unit availability.
- Continue to restructure and refine Central Stores operations, procedures and processes. Control inventory levels and improve accountability of employees and Stores operation.
- In many older neighborhoods the storm sewer systems are seriously undersized, resulting in flooding even during relatively small rain events. These old systems need to be reconstructed and enlarged to handle the runoff generated in the neighborhoods.
- Additional automation is needed in Public Works. For example, many Public Works operations could be aided through the use of Geographic Information Systems (GIS) technology, but those data layers do not currently exist. For example, street signs, storm water pipes, street segments and other information could be stored and accessed electronically.
- Generally, maintenance resources should be increased as maintenance responsibilities increase, usually through annexation.

Public Works Budget Summary

	2003 Actual	2004 Adopted	2004 Revised	2005 Adopted	2006 Approved
Personal Services	17,414,556	18,753,390	18,770,910	20,012,330	20,821,360
Contractual Services	18,271,950	20,478,350	20,325,160	20,829,150	20,889,250
Commodities	4,480,131	5,869,430	5,536,410	5,475,390	5,409,720
Capital Outlay	2,630,756	3,102,920	3,560,270	3,834,940	4,145,090
Other	6,488,078	5,408,370	7,411,210	37,143,560	5,495,490
Total Local Expenditures	**49,285,471**	**53,612,460**	**55,603,960**	**87,295,370**	**56,760,910**
General Fund Expenditures	9,566,468	9,444,390	9,691,000	10,224,960	10,402,100
Gas Tax Expenditures	18,522,227	20,839,070	21,194,970	22,605,250	23,679,780
Construction and Demolition Landfill	1,139,158	677,040	1,437,480	3,586,470	735,610
Landfill Post Closure	2,102,119	1,732,880	2,734,140	27,253,410	1,905,880
State Office Building	934,222	1,283,210	1,196,780	1,600,640	1,105,000
City-County Flood Control	1,209,698	1,487,380	1,487,380	1,582,540	1,643,220
Storm Water Utility	5,344,140	6,904,270	6,827,990	6,823,310	6,223,760
Fleet Internal Service Fund	10,467,439	11,244,220	11,034,220	13,618,790	11,065,560
Total Local Expenditures	**49,285,471**	**53,612,460**	**55,603,960**	**87,295,370**	**56,760,910**
Total full-time positions	453	453	453	470	470
Total part-time positions	49	49	19	19	19
Total FTE positions	476.08	476.08	461.5	478.5	478.5

For additional information on the Public Works Department visit www.wichita.gov!

Wichita-Valley Center Flood Control Project

The Wichita-Valley Center Flood Control Project, also known as the "Big Ditch," was completed in 1960. The floodway diverts excess water flows from the Big and Little Arkansas Rivers, instead taking the water south of Wichita before returning the flow to the Arkansas River. The floodway protects an area roughly from Ridge Road on the west to Hillside Avenue on the east, a span of 7 miles. The project includes 41 miles of channels, 97 miles of levees, 60 interior drainage structures and an area of 5,613 acres.

The photo above depicts the intersection of Douglas and Pattie, on the east side of downtown, in April of 1944. Flooding was common in many areas of Wichita prior to the construction of the "Big Ditch."